

ATTACHMENT 4

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

CISCO SYSTEMS, INC.,)
)
Plaintiff,)
) Case No.
vs.) 5:14-cv-05344-BLF (PSG)
)
ARISTA NETWORKS, INC.,)
)
Defendant.)
)
_____)

VIDEOTAPED DEPOSITION OF KEVIN C. ALMERO TH
San Francisco, California
Tuesday, June 28, 2016
Volume I

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Reported by:
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CSR No. 5908
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Pages 1 - 296

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<p>1 San Francisco, California</p> <p>2 Tuesday, June 28, 2016</p> <p>3 8:34 a.m.</p> <p>4</p> <p>5 PROCEEDINGS</p> <p>6 THE VIDEO OPERATOR: Good morning. We're</p> <p>7 on the record. The time is 8:34 a.m., and the date</p> <p>8 is June 28th, 2016. This begins the videotaped</p> <p>9 deposition of Dr. Kevin Almeroth.</p> <p>10 My name is Sean Grant, here with our court 08:34:13</p> <p>11 reporter, Carla Soares. We're here from Veritext</p> <p>12 Legal Solutions at the request of counsel for</p> <p>13 defendant.</p> <p>14 This deposition is being held at Kecker &</p> <p>15 Van Nest LLP in San Francisco, California. The 08:34:24</p> <p>16 caption of this case is Cisco Systems, Inc., versus</p> <p>17 Arista Networks, Inc., Case No. 5:14-cv-05344-BLF.</p> <p>18 Please note that audio- and</p> <p>19 video-recording will take place unless all parties</p> <p>20 have agreed to go off the record. Microphones are 08:34:45</p> <p>21 sensitive and may pick up whispers, private</p> <p>22 conversations, or cellular interference.</p> <p>23 At this time, will counsel please identify</p> <p>24 themselves and state whom they represent.</p> <p>25 MR. HOLMES: Drew Holmes on behalf of 08:34:58</p> <p style="text-align: right;">Page 6</p>	<p>1 other times I've testified under deposition. I 08:36:01</p> <p>2 don't know that there's a distinction in what</p> <p>3 Mr. Holmes said.</p> <p>4 Q Okay. Are you asking the court to</p> <p>5 recognize you as an expert in this matter? 08:36:14</p> <p>6 A I don't know that I'd be asking the court</p> <p>7 to do that, but certainly, I think my qualifications</p> <p>8 justify that the court see me as an expert.</p> <p>9 Q On what subjects relevant to the opinions</p> <p>10 expressed in your reports do you claim to be an 08:36:37</p> <p>11 expert?</p> <p>12 A I'm not sure I understand the question. I</p> <p>13 don't know that I can sit here and come up with the</p> <p>14 definitive list of subjects.</p> <p>15 I think on any of the subjects that I 08:36:58</p> <p>16 testify about and offer opinions about, I believe</p> <p>17 I'm qualified as an expert.</p> <p>18 Q Are you an expert in computer science?</p> <p>19 A I believe I am.</p> <p>20 Q Are you an expert in networking 08:37:09</p> <p>21 technology?</p> <p>22 A I believe I am.</p> <p>23 Q Are you an expert in network device</p> <p>24 operating systems?</p> <p>25 A I believe I am. 08:37:19</p> <p style="text-align: right;">Page 8</p>
<p>1 Cisco, as well as the witness, from Quinn Emanuel. 08:35:00</p> <p>2 MR. SILBERT: David Silbert, Kecker &</p> <p>3 Van Nest, on behalf of defendant Arista.</p> <p>4 MR. WONG: Ryan Wong of Kecker & Van Nest</p> <p>5 on behalf of Arista. 08:35:11</p> <p>6 THE VIDEO OPERATOR: And also present?</p> <p>7 MR. BLACK: I'm John Black. I'm an expert</p> <p>8 witness for Arista.</p> <p>9 THE VIDEO OPERATOR: Will the certified</p> <p>10 court reporter please swear in the witness. 08:35:29</p> <p>11 KEVIN C. ALMEROOTH,</p> <p>12 having been administered an oath, was examined and</p> <p>13 testified as follows:</p> <p>14 EXAMINATION</p> <p>15 BY MR. SILBERT: 08:35:31</p> <p>16 Q Good morning, Dr. Almeroth.</p> <p>17 A Good morning.</p> <p>18 Q A minute ago counsel for Cisco introduced</p> <p>19 himself as representing Cisco and also representing</p> <p>20 you in your capacity as a witness. 08:35:41</p> <p>21 Is it your understanding that you're being</p> <p>22 represented in your capacity as a witness today by</p> <p>23 the Quinn Emanuel law firm?</p> <p>24 A I don't have an understanding that the</p> <p>25 representation is any different than any of the 08:35:59</p> <p style="text-align: right;">Page 7</p>	<p>1 Q From -- for how many different network 08:37:24</p> <p>2 device vendors have you reviewed any source code for</p> <p>3 their network device operating systems?</p> <p>4 MR. HOLMES: Objection. Vague.</p> <p>5 THE WITNESS: Generally speaking, or just 08:37:39</p> <p>6 in the conjunction -- just in conjunction with this</p> <p>7 case?</p> <p>8 BY MR. SILBERT:</p> <p>9 Q Well, why don't we take them one by one.</p> <p>10 First, in conjunction with this case, for 08:37:47</p> <p>11 how many network device vendors have you reviewed</p> <p>12 any source code for their network device operating</p> <p>13 systems?</p> <p>14 A Sitting here right now, I specifically</p> <p>15 recall two: Cisco and Arista. There might have 08:38:04</p> <p>16 been others. I just don't remember them.</p> <p>17 Q And generally speaking, for how many</p> <p>18 different network device vendors have you reviewed</p> <p>19 any source code for their network device operating</p> <p>20 systems? 08:38:22</p> <p>21 A Maybe ten.</p> <p>22 Q Can you name them?</p> <p>23 A In addition to Cisco and Arista, I believe</p> <p>24 I've reviewed source code for A10, maybe F5, 3Com.</p> <p>25 Quagga is an open source so I've looked at source 08:38:49</p> <p style="text-align: right;">Page 9</p>

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<p>1 device and then looking at source code and 08:45:50</p> <p>2 potentially even parsing-related source code.</p> <p>3 Q In what context did you review</p> <p>4 parsing-related source code for Foundry's network</p> <p>5 operating system? 08:46:07</p> <p>6 A It would have been in the context of</p> <p>7 litigation. I think there's a case in my CV. I'm</p> <p>8 not sure how significant any of the parsing</p> <p>9 functionality was to that case. It might have been</p> <p>10 fairly cursory. 08:46:21</p> <p>11 I would need a few minutes to try and dig</p> <p>12 into the recesses of long-term memory and see if I</p> <p>13 could even remember what that case was about.</p> <p>14 Q Do you consider yourself an expert in</p> <p>15 reading emails and knowing what the authors of those 08:46:40</p> <p>16 emails intended?</p> <p>17 MR. HOLMES: Objection. Vague and</p> <p>18 compound.</p> <p>19 THE WITNESS: I don't know by what</p> <p>20 criteria you would use to determine whether somebody 08:47:01</p> <p>21 was an expert. I'm not sure that some particular</p> <p>22 expertise is required to look at an email, so I'm</p> <p>23 not sure I can really answer that question.</p> <p>24 But I certainly can say that, especially</p> <p>25 in technical disciplines, looking at emails, I can 08:47:22</p> <p style="text-align: right;">Page 14</p>	<p>1 to do that? Or is that simply something you can do 08:48:38</p> <p>2 in the same way a layperson can do?</p> <p>3 MR. HOLMES: Same objections, and it's</p> <p>4 also compound.</p> <p>5 THE WITNESS: Again, I'm not sure what 08:48:50</p> <p>6 threshold you're using for expertise, what skill set</p> <p>7 you would particularly identify as qualifying</p> <p>8 somebody as an expert beyond that of a layperson.</p> <p>9 And as I've said in previous answers, I</p> <p>10 certainly think I have the capability to look at 08:49:06</p> <p>11 emails. And specifically the emails that I did look</p> <p>12 at in this case, I don't think I'm, in this case,</p> <p>13 attempting to intuit any special knowledge of that</p> <p>14 person beyond simply what the emails state in the</p> <p>15 context of all of the other evidence. 08:49:29</p> <p>16 BY MR. SILBERT:</p> <p>17 Q So you're not expressing an opinion on</p> <p>18 what the state of mind of any Arista employee was at</p> <p>19 any time beyond what, in your view, the emails</p> <p>20 state? 08:49:41</p> <p>21 MR. HOLMES: Objection. Calls for a legal</p> <p>22 conclusion, vague.</p> <p>23 THE WITNESS: Well, I think the report</p> <p>24 speaks for itself. I don't think I can sit here and</p> <p>25 offer a qualification of my opinions in the way that 08:49:51</p> <p style="text-align: right;">Page 16</p>
<p>1 certainly see what they say and understand the 08:47:26</p> <p>2 context in which they offer what they've said.</p> <p>3 BY MR. SILBERT:</p> <p>4 Q You can explain the technical issues</p> <p>5 related to an email that discusses technical issues 08:47:39</p> <p>6 in your field; is that right?</p> <p>7 A That's part of what my answer was. And</p> <p>8 for at least that part of it, I think that's</p> <p>9 correct.</p> <p>10 Q Do you claim to have some special 08:47:55</p> <p>11 knowledge of the state of mind of Arista employees</p> <p>12 at any particular point of time?</p> <p>13 MR. HOLMES: Objection. Vague, calls for</p> <p>14 a legal conclusion.</p> <p>15 THE WITNESS: I'm not sure what you mean 08:48:11</p> <p>16 by "special knowledge."</p> <p>17 I certainly can look at an email in the</p> <p>18 context of a collection of emails and see the words</p> <p>19 that were written in that email, and consider that</p> <p>20 email in the context of other evidence, and use it 08:48:24</p> <p>21 to support a conclusion that I've reached. I think</p> <p>22 I have that ability.</p> <p>23 BY MR. SILBERT:</p> <p>24 Q But do you consider yourself to be an</p> <p>25 expert with particular training and qualifications 08:48:35</p> <p style="text-align: right;">Page 15</p>	<p>1 you've expressed it. I don't know that that's 08:49:56</p> <p>2 necessarily accurate.</p> <p>3 I think that the opinions in the report</p> <p>4 are what they are, and I think the report speaks for</p> <p>5 itself. 08:50:04</p> <p>6 BY MR. SILBERT:</p> <p>7 Q Do you claim to be an expert at comparing</p> <p>8 works to determine if one was plagiarized from</p> <p>9 another?</p> <p>10 MR. HOLMES: Objection. Vague as to 08:50:21</p> <p>11 "works."</p> <p>12 THE WITNESS: Again, I'm not sure what</p> <p>13 threshold you're using for expertise there.</p> <p>14 Certainly, I have spent a lot of time in</p> <p>15 the last 20 years looking at student assignments and 08:50:34</p> <p>16 source code and attempted to determine instances of</p> <p>17 plagiarism.</p> <p>18 I've also done a fair amount of research</p> <p>19 in developing tools that can assist in plagiarism</p> <p>20 detection and using those tools. And that involves 08:50:54</p> <p>21 a multistep process that I think I have a lot of</p> <p>22 experience in.</p> <p>23 So I think, generally speaking, certainly</p> <p>24 based on both the experiences I've had as an</p> <p>25 instructor, the research that I've done, and all of 08:51:12</p> <p style="text-align: right;">Page 17</p>

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<p>1 Q Did you use any of the software tools 08:58:00</p> <p>2 described here in paragraphs 31 and 32 to compare</p> <p>3 any work by Arista with any work by Cisco?</p> <p>4 A No. It wasn't necessary.</p> <p>5 Q Why not? 08:58:18</p> <p>6 A I think when you look at the testimony of</p> <p>7 witnesses who have basically admitted to copying,</p> <p>8 that it really isn't necessary to then go and use a</p> <p>9 tool.</p> <p>10 So when you have the 30(b)(6) witnesses 08:58:32</p> <p>11 from Arista testifying that they copied, when you</p> <p>12 have documents showing that they copied both</p> <p>13 conceptually, that it really isn't necessary to go</p> <p>14 off and use one of these tools.</p> <p>15 For example, if I had two students who 08:58:53</p> <p>16 came to me and said, "My conscience or our</p> <p>17 consciences got the better of us and we want to</p> <p>18 admit that we copied our assignments," I'm not sure</p> <p>19 I would then have to go through and do a comparison</p> <p>20 using a tool. 08:59:11</p> <p>21 It's also the case that there are other</p> <p>22 ways to detect existences of similarity. For</p> <p>23 example, the ones that I've included in my report.</p> <p>24 So it wasn't really necessary to go</p> <p>25 through and use something like PAIRwise or MOSS. 08:59:27</p> <p style="text-align: right;">Page 22</p>	<p>1 MR. HOLMES: Objection. Vague. 09:00:48</p> <p>2 THE WITNESS: It depends on the tool. But</p> <p>3 one of the things -- and actually the version of the</p> <p>4 tool was different. But one of the things that you</p> <p>5 can produce as output from the second version of 09:01:02</p> <p>6 PAIRwise is a side-by-side comparison of two</p> <p>7 documents, or a similarity matrix for all of the</p> <p>8 documents in a corpus. Something like that.</p> <p>9 BY MR. SILBERT:</p> <p>10 Q And what is a similarity matrix for all 09:01:19</p> <p>11 documents in a corpus?</p> <p>12 A So one of the things that is a challenge</p> <p>13 in a classroom that isn't really the challenge here</p> <p>14 is looking at each student compared to every other</p> <p>15 student, to do kind of a comparison of every student 09:01:40</p> <p>16 to every other student.</p> <p>17 In this instance, you really only have the</p> <p>18 two parties, Cisco and Arista.</p> <p>19 So that a comparison matrix would say, for</p> <p>20 a particular student paper, it has a similarity 09:01:58</p> <p>21 score as compared to every other student in the</p> <p>22 class, and then to do that in a two-dimensional</p> <p>23 matrix.</p> <p>24 Q If you had wanted to, could you have</p> <p>25 created a similarity score comparing the command -- 09:02:12</p> <p style="text-align: right;">Page 24</p>
<p>1 Q So is it your opinion that the plagiarism 08:59:32</p> <p>2 tools and systems that you developed are not</p> <p>3 relevant to the opinions you've expressed in this</p> <p>4 matter?</p> <p>5 MR. HOLMES: Objection. Misstates prior 08:59:41</p> <p>6 testimony.</p> <p>7 THE WITNESS: I'm not -- first of all, I</p> <p>8 didn't say that.</p> <p>9 Second, I'm not sure, really, what you</p> <p>10 mean by "relevant." 08:59:50</p> <p>11 As part of an analysis, it could have been</p> <p>12 a tool I could have used. I don't really think</p> <p>13 there's any disagreement, even among the experts,</p> <p>14 that there wasn't copying.</p> <p>15 And for tools like PAIRwise and MOSS, part 09:00:10</p> <p>16 of their function is to be able to determine whether</p> <p>17 or not there are phrases or sentences or paragraphs</p> <p>18 or some amount of material that is copied.</p> <p>19 But I didn't feel that I needed to use</p> <p>20 those tools, given the voluminous amount of evidence 09:00:31</p> <p>21 that exists in this case with respect to the fact</p> <p>22 that copying did, in fact, take place</p> <p>23 BY MR. SILBERT:</p> <p>24 Q When you use a tool like PAIRwise or MOSS,</p> <p>25 what output does it give you? 09:00:44</p> <p style="text-align: right;">Page 23</p>	<p>1 CLI command reference manuals for multiple different 09:02:18</p> <p>2 switch vendors including, say, Cisco, Arista, Dell,</p> <p>3 HP, Brocade, Juniper, JunosE, and others?</p> <p>4 MR. HOLMES: Objection. Vague, compound</p> <p>5 and incomplete hypothetical. 09:02:37</p> <p>6 THE WITNESS: The first answer is I</p> <p>7 suppose anything is hypothetically possible.</p> <p>8 BY MR. SILBERT:</p> <p>9 Q I'm sorry to interrupt. Let me just</p> <p>10 address that. 09:02:55</p> <p>11 My question was, using the software tools</p> <p>12 that you've been testifying about, could you have</p> <p>13 done that?</p> <p>14 A Sure.</p> <p>15 So for example, PAIRwise -- as I was 09:03:04</p> <p>16 answering before, anything is hypothetically</p> <p>17 possible. The basic functionality of PAIRwise is to</p> <p>18 take a repository, a directory of documents, and to</p> <p>19 perform a comparison.</p> <p>20 But I don't believe that it would have 09:03:23</p> <p>21 been either practical or relevant to do that kind of</p> <p>22 comparison, principally because in a classroom, for</p> <p>23 example, you have fairly homogenous items or papers.</p> <p>24 It's in response to a particular assignment or</p> <p>25 question or task. 09:03:45</p> <p style="text-align: right;">Page 25</p>

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<p>1 BY MR. SILBERT: 10:07:17</p> <p>2 Q Is it more than half a million dollars?</p> <p>3 A I have no idea.</p> <p>4 Q You have documents in your possession, do</p> <p>5 you not, from which you could obtain the answer to 10:07:23</p> <p>6 that question?</p> <p>7 A I believe I do.</p> <p>8 Q And I'm sure this goes without saying, but</p> <p>9 I'll ask you to please preserve those documents and</p> <p>10 not destroy them. 10:07:35</p> <p>11 A Sure. It just isn't interesting or</p> <p>12 relevant to me, except maybe at tax season.</p> <p>13 Q Do you recall that I took your deposition</p> <p>14 previously in this case related to patent issues?</p> <p>15 A Yes. 10:07:51</p> <p>16 Q Do you recall testifying at that time that</p> <p>17 you had been paid or billed approximately \$600,000?</p> <p>18 A I don't have a recollection of that</p> <p>19 testimony.</p> <p>20 Q Have you been an expert for Cisco in other 10:08:14</p> <p>21 matters besides its disputes with Arista?</p> <p>22 MR. HOLMES: Objection. Vague as to</p> <p>23 "matters."</p> <p>24 THE WITNESS: Could you repeat the</p> <p>25 question? 10:08:33</p> <p style="text-align: right;">Page 62</p>	<p>1 A I have no idea. 10:09:52</p> <p>2 Q Do you have records that would contain</p> <p>3 that information?</p> <p>4 A I might. I'm not sure I've kept billing</p> <p>5 records. 10:10:13</p> <p>6 Once a case closes and I've been paid, I</p> <p>7 don't know that I keep all of the files associated</p> <p>8 with that case. In some instances, the protective</p> <p>9 order says not to.</p> <p>10 But with respect to billing records, I 10:10:24</p> <p>11 don't know that I've kept records. I have 1099s,</p> <p>12 but I don't recall if I get paid by Quinn Emanuel or</p> <p>13 by the company I've been hired to provide opinions</p> <p>14 for.</p> <p>15 So I'm not entirely certain I could 10:10:45</p> <p>16 reconstruct those numbers.</p> <p>17 Q Have you been retained for other</p> <p>18 litigation matters by the Kirkland & Ellis law firm?</p> <p>19 A Yes.</p> <p>20 Q How many? 10:11:04</p> <p>21 A And to clarify, in the past or present?</p> <p>22 Q Either. I'm excluding the current</p> <p>23 litigation and the ITC litigation between Cisco and</p> <p>24 Arista.</p> <p>25 A Sure. Probably about the same number. 10:11:22</p> <p style="text-align: right;">Page 64</p>
<p>1 BY MR. SILBERT: 10:08:34</p> <p>2 Q Have you been an expert consultant for</p> <p>3 Cisco in other matters besides its disputes with</p> <p>4 Arista?</p> <p>5 MR. HOLMES: Same objection. 10:08:41</p> <p>6 BY MR. SILBERT:</p> <p>7 Q And I'm talking about litigation matters,</p> <p>8 to address your counsel's objection.</p> <p>9 A I don't recall any.</p> <p>10 There might have been an instance where I 10:09:01</p> <p>11 had an interview with a law firm about a matter</p> <p>12 related to Cisco. I might have even signed a</p> <p>13 letter. But I don't recall doing any work or</p> <p>14 billing any hours. I don't think I've actually done</p> <p>15 any work for Cisco in any other matters. 10:09:16</p> <p>16 Q Have you been retained previously by the</p> <p>17 Quinn Emanuel law firm for other litigation matters?</p> <p>18 A I have.</p> <p>19 Q How many times?</p> <p>20 A Hard to say. Maybe three or four. 10:09:37</p> <p>21 Q Apart from this case?</p> <p>22 A Yes.</p> <p>23 Q And what's the total amount, to the best</p> <p>24 of your knowledge, that you were paid in those other</p> <p>25 matters, where you were retained by Quinn Emanuel? 10:09:48</p> <p style="text-align: right;">Page 63</p>	<p>1 Three, four. Could be a couple more. 10:11:24</p> <p>2 Akamai/Limelight was Kirkland.</p> <p>3 Q And is it likewise true that you don't</p> <p>4 know, as you sit here today, how much you've been</p> <p>5 paid in those matters? 10:11:42</p> <p>6 A That's correct. It would be the same</p> <p>7 answer for Quinn Emanuel.</p> <p>8 Q And I take it your answer is the same</p> <p>9 about whether or not you have records that would</p> <p>10 reflect that information. 10:11:52</p> <p>11 A That's correct.</p> <p>12 Q And I understand that you don't know what</p> <p>13 you may have kept from matters that have concluded.</p> <p>14 But again, I'll ask you, to the extent you do have</p> <p>15 documentation, to please preserve it. 10:12:01</p> <p>16 A I will listen to advice of counsel, my</p> <p>17 counsel, as to whether I should do that or not.</p> <p>18 Q Do you hope to get more litigation</p> <p>19 consulting work from Cisco in the future?</p> <p>20 A I don't know that I have opinions one way 10:12:26</p> <p>21 or the other. I would be fine if I didn't, I would</p> <p>22 be fine if I did. I take each matter as it comes</p> <p>23 and evaluate it for what it is.</p> <p>24 Q How long did you spend reviewing source</p> <p>25 code to formulate your opinions in this case? 10:12:46</p> <p style="text-align: right;">Page 65</p>

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<p>1 A That is hard to say for several reasons. 10:12:56</p> <p>2 I certainly spent time here at Kecker</p> <p>3 reviewing Arista source code. I've spent time</p> <p>4 reviewing -- let me stop for a second. For that, I</p> <p>5 don't recall how many hours I was here. I think it 10:13:15</p> <p>6 was over the course of three days.</p> <p>7 I've also reviewed Cisco source code in</p> <p>8 this particular matter, and I've spent many hours in</p> <p>9 the '944 and '945 cases reviewing Arista and Cisco</p> <p>10 source code. At least some of that review is 10:13:37</p> <p>11 relevant specifically to CLI, and much of that time,</p> <p>12 especially with respect to understanding Arista</p> <p>13 source code, was just understanding the structure of</p> <p>14 the code, how it works, key features like SysDB, how</p> <p>15 it relates to things like CLI. 10:14:02</p> <p>16 So it would be hard to give you any sort</p> <p>17 of specific number.</p> <p>18 Q How many lines of code are in Cisco's IOS</p> <p>19 source code?</p> <p>20 MR. HOLMES: Objection. Vague. 10:14:22</p> <p>21 THE WITNESS: It depends on the version of</p> <p>22 IOS, whether it's IOS XE, XR, NX-OS, what version of</p> <p>23 the code itself, what train of the code.</p> <p>24 And then for any particular versions, or</p> <p>25 in general, it can vary significantly. So I don't 10:14:45</p> <p style="text-align: right;">Page 66</p>	<p>1 something I'm sitting there and counting in terms 10:16:23</p> <p>2 of, okay, I looked at this file. How many lines are</p> <p>3 in this file? Did I look at every line this time?</p> <p>4 What did I look at last time?</p> <p>5 The best I can tell you is that I've 10:16:39</p> <p>6 looked at a lot of source code; certainly, thousands</p> <p>7 of lines of code for both Cisco and Arista.</p> <p>8 Q Did you know -- sorry. Were you finished?</p> <p>9 A Potentially tens of thousands or hundreds</p> <p>10 of thousands. 10:16:52</p> <p>11 You narrowed it to this particular</p> <p>12 proceeding. But over the course of this</p> <p>13 investigation or this proceeding and then the</p> <p>14 two ITC investigations, I'd be surprised if it were</p> <p>15 less than a million. 10:17:05</p> <p>16 Q You think you've personally read a million</p> <p>17 lines of code from each Cisco and Arista?</p> <p>18 A I don't know if it's each, but like I</p> <p>19 said, I've looked at a lot of code. And as I said,</p> <p>20 I would be surprised if it was less than a million 10:17:21</p> <p>21 lines of code.</p> <p>22 Q Do you know how many lines of code are in</p> <p>23 Arista's EOS source code?</p> <p>24 A No, not off the top of my head.</p> <p>25 Q Do you know a ballpark number? 10:17:32</p> <p style="text-align: right;">Page 68</p>
<p>1 know that I have a specific number for you. 10:14:54</p> <p>2 BY MR. SILBERT:</p> <p>3 Q Do you know how many lines of code are in</p> <p>4 IOS version 15?</p> <p>5 A No. I don't have that number memorized. 10:15:04</p> <p>6 Q Do you think it's more than 20 million?</p> <p>7 A I don't recall specifically enough to say</p> <p>8 yes or no to that question. There's lots of</p> <p>9 different versions. I just don't have the number</p> <p>10 memorized. 10:15:26</p> <p>11 Q How many lines of IOS code did you</p> <p>12 actually read to formulate your opinions in this</p> <p>13 case?</p> <p>14 A I don't know that I could give you a</p> <p>15 specific number. I don't even really think I could 10:15:43</p> <p>16 guess.</p> <p>17 Q You think it's tens of thousands?</p> <p>18 A I would be surprised if it was less than</p> <p>19 tens of thousands.</p> <p>20 Q Do you think it's hundreds of thousands? 10:16:05</p> <p>21 A Beyond that, I don't really think I could</p> <p>22 give you any specificity.</p> <p>23 I've reviewed a lot of code, both Cisco</p> <p>24 code and Arista code, but I don't know that I could</p> <p>25 give you a ballpark number. It's obviously not 10:16:19</p> <p style="text-align: right;">Page 67</p>	<p>1 A No. And again, it's the same question 10:17:33</p> <p>2 that -- there are different versions of EOS.</p> <p>3 There's different versions of EOS that have been</p> <p>4 produced, 20 or 30. Again, I don't remember</p> <p>5 specifically. And each one has a different number 10:17:46</p> <p>6 of lines of code.</p> <p>7 I actually, at some point, recall going</p> <p>8 through and doing a line count of each of the</p> <p>9 versions, but I just don't have those numbers</p> <p>10 memorized. 10:18:06</p> <p>11 Q You say in your report that Cisco has</p> <p>12 spent hundreds of millions of dollars developing</p> <p>13 IOS; is that right?</p> <p>14 A You would have to point me to the</p> <p>15 paragraph in my report. It sounds vaguely familiar. 10:18:14</p> <p>16 Q Sure. Why don't you take a look at</p> <p>17 paragraph 43 on page 12.</p> <p>18 A Okay.</p> <p>19 Q Do you see the statement I'm referring to?</p> <p>20 A Yes. 10:18:30</p> <p>21 Q Do you know what portion of those hundreds</p> <p>22 of millions of dollars was spent developing the CLI?</p> <p>23 A Off the top of my head, no. I think this</p> <p>24 is referencing one of the exhibits to Cisco's motion</p> <p>25 for preliminary injunction, the declaration. There 10:18:49</p> <p style="text-align: right;">Page 69</p>

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<p>1 network switch vendors' use of CLI modes, prompts, 11:19:24 2 or responses, command responses, that are used in 3 Cisco IOS? 4 MR. HOLMES: Same objections. 5 THE WITNESS: That covers a lot of ground. 11:19:41 6 And what I would say is, I would defer to what my 7 report says. 8 I've included the opinions in my report. 9 And to the extent I haven't addressed one of the 10 particular aspects that are within the scope of your 11:19:54 11 question, it shouldn't be meant that I agree with 12 his findings. 13 BY MR. SILBERT: 14 Q I'm not -- again, to be clear, I'm not 15 asking you whether you agree with them. I'm asking 11:20:05 16 you what you've disclosed as your opinions in your 17 report. 18 Isn't it true that in your reports, you 19 don't dispute anywhere the accuracy of the data that 20 Dr. Black presents in his opening report on the 11:20:21 21 number of CLI -- and identity of CLI elements used 22 in Cisco's CLIs that are also used by other network 23 device vendors? 24 MR. HOLMES: Objection. Vague, compound. 25 The documents speak for themselves. 11:20:37 Page 102</p>	<p>1 "Dell's corporate representatives stated under oath 11:22:30 2 that Dell had not copied Cisco's IOS CLI and that he 3 was not aware of anyone else in the industry copying 4 Cisco, and that Dell has its own commands that 5 others have not used," and then you quote some 11:22:45 6 testimony on the next page there, right? 7 A I do see that. 8 Q Do you believe that it's a balanced and 9 fair appraisal of the evidence that you've reviewed 10 in the case to say that you're not aware of any 11:22:56 11 evidence that Dell has copied Cisco CLI? 12 A I think that you have to look at the 13 opinions that I've included in the middle of that 14 paragraph. 15 And what I'm saying is, I have seen no 11:23:29 16 such evidence that even comes close to this level of 17 copying with respect to HP, and then similarly for 18 Dell. 19 The analysis that I've done has been with 20 respect to Arista. And as I testified to this 11:23:43 21 morning with respect to copying and plagiarism, part 22 of what you need to do is to look at the evidence 23 beyond just the existence of similarities. 24 You can start with similarities and 25 progress from there. In the case of Arista, there 11:24:04 Page 104</p>
<p>1 THE WITNESS: I would essentially give you 11:20:40 2 the same answer that I gave to the last question. 3 I think the report speaks for itself, and 4 the point really is, even though I haven't responded 5 to his particular statements doesn't mean that I 11:20:53 6 accept his data as correct. 7 BY MR. SILBERT: 8 Q Your testimony is that you've seen no 9 evidence that other switch vendors besides Arista 10 and Huawei have copied Cisco CLI; is that right? 11:21:09 11 A I believe there's an opinion along those 12 lines. You can point me to the paragraph in my 13 report that you're referring to. 14 Q Okay. Let's take one specific example. 15 I'm looking at your opening report, which is 11:21:31 16 Exhibit 1538. Would you look, please, at 17 paragraph 97 on page 39? 18 I must have that wrong. It must be your 19 rebuttal report. Yeah, I apologize. I meant to say 20 your rebuttal report. 11:22:10 21 MR. HOLMES: Which page is that? 22 MR. SILBERT: Page 39, paragraph 97. 23 THE WITNESS: Okay. 24 BY MR. SILBERT: 25 Q Looking at the bottom of page 39, you say, 11:22:27 Page 103</p>	<p>1 is admissions from Arista corporate representatives 11:24:07 2 and witnesses that they copied commands, 3 documentation, command modes, prompts. The whole 4 list of things. 5 There isn't that kind of evidence for HP 11:24:25 6 and Dell. And to the extent that as one of its 7 defenses, Arista and Dr. Black want to say that Dell 8 has copied, then there would need to be some 9 additional evidence beyond just the similarities in 10 commands. 11:24:47 11 And so based on the evidence that I've 12 seen, which wasn't really the focus of my 13 investigation, to generate evidence or ask for 14 evidence that would potentially require subpoenaing 15 Dell and HP, there isn't any such evidence of 11:25:04 16 copying. 17 And to the extent Dr. Black makes an 18 argument that there is copying based on 19 similarities, I'm saying in paragraph 97 that it 20 doesn't rise to the level of evidence with respect 11:25:23 21 to Arista's copying. 22 Q Would you please look at Exhibit I to the 23 Black report, Exhibit 1540? 24 You reviewed this exhibit carefully before 25 you prepared your rebuttal report, didn't you? 11:25:53 Page 105</p>

1 A I did. 11:25:55
2 Q Exhibit A is titled "Overlapping Dell and
3 Cisco CLI Commands," correct?
4 A Yes.
5 Q And you don't, anywhere in your report, 11:26:05
6 either of your reports, dispute that both Cisco and
7 Dell use the CLI commands that are listed here in
8 Exhibit A, do you?
9 A I think I've testified to that question
10 earlier. 11:26:21
11 I haven't -- I don't recall, sitting here
12 right now, where I've addressed any of these
13 commands specifically. It certainly might be in the
14 report somewhere. And because I haven't addressed
15 it, it shouldn't be interpreted that it's an 11:26:40
16 acceptance of this information.
17 I would also point out that there are
18 commands that are not at issue in this case, and so
19 there's really a question of relevancy of at least
20 some of this information. 11:27:01
21 Q There are 1,652 CLI commands listed in
22 Exhibit I, correct?
23 A That's what the last number on the last
24 page reads.
25 I'd also note that there are things like 11:27:18

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1 1,637, which is the single word "UDP." And so I'm 11:27:22
2 not aware -- and this goes to the incompatibility of
3 Appendix I. Things like "traceroute" by itself as a
4 single word isn't potentially relevant with respect
5 to copying. 11:27:43
6 And again, the fact that you have single
7 words like "UDP," "TCP," isn't necessarily evidence
8 of copying. I think you have to look at that
9 evidence, and it's different in scope than the kinds
10 of things that have been identified as part of the 11:28:04
11 508 commands that Arista has copied, plus all the
12 other evidence where Arista has said they copied.
13 Q Have you ever counted the number of
14 single-word commands that are listed in Exhibit I?
15 A No, I haven't tried to come up with a 11:28:19
16 specific number.
17 Q What is your best explanation for how Dell
18 came to use more than 1,000 of the same CLI commands
19 that Cisco uses without copying Cisco?
20 MR. HOLMES: Objection. Calls for 11:28:34
21 speculation.
22 THE WITNESS: Again, I haven't confirmed
23 that these are actual commands. I would be
24 surprised that you could type the word "UDP" at the
25 Dell command line and see a result of that. 11:28:46

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1 So I haven't gone through and confirmed 11:28:50
2 that every one of these commands that Dr. Black
3 alleges are commands are commands. I've looked at
4 what he's used this appendix to identify and the
5 opinions that are based on this appendix and 11:29:05
6 rebutted those in my report.
7 BY MR. SILBERT:
8 Q Do you have any explanation at all for how
9 Dell came to use more than 1,000 of the same CLI
10 commands that Cisco uses other than that it copied 11:29:18
11 Cisco?
12 MR. HOLMES: Objection. Calls for
13 speculation, calls for a legal conclusion.
14 THE WITNESS: I haven't tried to answer
15 that question. I don't think it's relevant to the 11:29:30
16 analysis that I've been asked to perform.
17 And to the extent that Dr. Black has
18 derived opinions from his Appendix I, I've rebutted
19 those opinions in my report.
20 BY MR. SILBERT: 11:29:43
21 Q Well, you stated in your report that --
22 and you just told me a minute ago that you're not
23 aware of evidence that any other -- any other
24 network device vendor has copied Cisco CLI, correct?
25 A I think -- 11:29:55

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1 MR. HOLMES: Objection. Misstates prior 11:29:56
2 testimony.
3 THE WITNESS: I think my report speaks for
4 itself.
5 BY MR. SILBERT: 11:30:00
6 Q You don't think that the information
7 presented in Appendix I showing more than 1,000
8 overlapping commands between Dell and Cisco is
9 evidence that Dell copied Cisco CLI?
10 MR. HOLMES: Objection. Asked and 11:30:15
11 answered, calls for speculation and a legal
12 conclusion.
13 THE WITNESS: So to be clear, I don't
14 agree that these are necessarily Dell and Cisco CLI
15 commands. There's also instances where you have 11:30:25
16 single-word commands.
17 And so I think there's additional analysis
18 that one could perform to answer the question about
19 whether or not this is evidence of copying
20 Another consideration is, as I testified 11:30:42
21 to earlier, that the -- even assuming that
22 everything in Appendix I is correct and you factor
23 out all of the single words and factor out all the
24 commands that may not be commands, and you have some
25 resulting number, that that by itself is not 11:30:59

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<p>1 evidence of copying; that -- as I testified to 11:31:01</p> <p>2 earlier, that just because I have similarities in</p> <p>3 words, isn't by itself sufficient to justify a</p> <p>4 conclusion that there was copying.</p> <p>5 In fact, as I've testified to, you have to 11:31:21</p> <p>6 be very careful that based on similarities, that you</p> <p>7 don't immediately conclude without consideration of</p> <p>8 other factors that there was copying or plagiarism.</p> <p>9 And it's a much different instance for</p> <p>10 Dell than it is for Arista, essentially because 11:31:36</p> <p>11 Arista has testified, and there's significant</p> <p>12 evidence that says that they actually copied.</p> <p>13 So getting from similarities to a</p> <p>14 conclusion that there was copying is one that</p> <p>15 requires more evidence and analysis than just a 11:31:50</p> <p>16 listing by itself.</p> <p>17 BY MR. SILBERT:</p> <p>18 Q So let me address some of these, one at a</p> <p>19 time.</p> <p>20 First of all, you've made the point that 11:31:57</p> <p>21 not everything in Appendix I might be a command that</p> <p>22 works, and some of them are single-word commands.</p> <p>23 Do you understand that in my questions,</p> <p>24 I've knocked off 600 commands just to give you the</p> <p>25 benefit of the doubt? 11:32:13</p> <p style="text-align: right;">Page 110</p>	<p>1 answers, and even embedded within the questions and 11:33:30</p> <p>2 the assumptions you've offered, both suggest that</p> <p>3 nobody has done this analysis, and that there isn't</p> <p>4 evidence beyond just a listing of commands who --</p> <p>5 you seem to have admitted in your questions -- that 11:33:46</p> <p>6 may not be commands or are single words, call into</p> <p>7 question how useful the data is as a dataset.</p> <p>8 BY MR. SILBERT:</p> <p>9 Q Well, no. I'm being conservative to give</p> <p>10 you the benefit of the doubt, because the numbers 11:34:00</p> <p>11 are so enormous, it just doesn't make a difference.</p> <p>12 Are you telling the jury that in your</p> <p>13 opinion, it's plausible that Dell is using more than</p> <p>14 1,000 of the same multiword CLI commands that Cisco</p> <p>15 uses, and that that situation exists without Dell 11:34:20</p> <p>16 having copied Cisco?</p> <p>17 MR. HOLMES: Same objections.</p> <p>18 THE WITNESS: What I would tell the jury</p> <p>19 is, nobody has done the analysis, that there isn't</p> <p>20 the level of evidence that exists for copying from 11:34:33</p> <p>21 Dell to -- that Dell copied Cisco as there is for</p> <p>22 Arista copying Cisco.</p> <p>23 And to the extent you look at this data,</p> <p>24 that the data doesn't pass simple analytical checks,</p> <p>25 just looking at it. 11:34:52</p> <p style="text-align: right;">Page 112</p>
<p>1 A I think that's actually fairly 11:32:16</p> <p>2 illuminating, the fact that you don't have a</p> <p>3 specific number, and there isn't this analysis, and</p> <p>4 Dr. Black hasn't done this analysis. So do you</p> <p>5 knock off 600 or 700 or 900 or 1,200? 11:32:27</p> <p>6 Q Or 300?</p> <p>7 A Or 300 or none? Because this analysis</p> <p>8 hasn't been conducted, Dr. Black hasn't done the</p> <p>9 analysis, he hasn't come up with a list of confirmed</p> <p>10 commands that are more than common singleton words 11:32:44</p> <p>11 in some instances, and then taken the next step to</p> <p>12 identify some additional evidence beyond the</p> <p>13 similarity, I think it's inappropriate to draw a</p> <p>14 conclusion that they were copied.</p> <p>15 Q As far as you're concerned, as an expert 11:33:01</p> <p>16 in this field, it's perfectly plausible to you that</p> <p>17 Dell would use more than 1,000 of the same CLI</p> <p>18 commands that Cisco uses, multiword commands, and</p> <p>19 not have copied Cisco CLI?</p> <p>20 MR. HOLMES: Objection. Misstates prior 11:33:18</p> <p>21 testimony, assumes facts not in evidence, calls for</p> <p>22 a legal conclusion.</p> <p>23 THE WITNESS: I think there's more to this</p> <p>24 analysis that has to be performed.</p> <p>25 And I think your questions and the 11:33:28</p> <p style="text-align: right;">Page 111</p>	<p>1 I haven't done the analysis of Appendix I 11:34:54</p> <p>2 and the commands, so somebody would have to do that</p> <p>3 analysis. Dr. Black hasn't done that analysis.</p> <p>4 BY MR. SILBERT:</p> <p>5 Q What's your basis for -- 11:35:06</p> <p>6 A Let me finish, please.</p> <p>7 Q Please, go ahead.</p> <p>8 A To the extent that somebody were to</p> <p>9 suggest that this is evidence of copying, to me, it</p> <p>10 suggests it's a place to start. Okay. Maybe 11:35:18</p> <p>11 somebody should look to what Dell is doing. But by</p> <p>12 itself, it's not evidence of copying. They could</p> <p>13 have copied Arista CLI.</p> <p>14 And so I need more evidence. I need to be</p> <p>15 able to do the analysis. I need to understand to 11:35:37</p> <p>16 the degree to which that analysis is relevant with</p> <p>17 respect to determining whether Arista and Cisco are</p> <p>18 copying.</p> <p>19 And I would tell the jury, there's</p> <p>20 potential here to do some additional analysis and to 11:35:51</p> <p>21 ask questions. But I don't believe that by itself</p> <p>22 it's really sufficient to demonstrate copying at the</p> <p>23 level that Arista has.</p> <p>24 Q What's your basis for saying that</p> <p>25 Dr. Black, quote, hasn't done the analysis? 11:36:06</p> <p style="text-align: right;">Page 113</p>

<p>1 The time is 12:44 p.m. 12:44:05</p> <p>2 BY MR. SILBERT:</p> <p>3 Q Good afternoon, Dr. Almeroth.</p> <p>4 Is it your opinion that Arista EOS has the</p> <p>5 same look and feel as Cisco IOS? 12:44:13</p> <p>6 A Could you repeat the question?</p> <p>7 Q Yeah.</p> <p>8 Is it your opinion that Arista EOS has the</p> <p>9 same look and feel as Cisco IOS?</p> <p>10 A I recall an opinion to that effect, or at 12:44:34</p> <p>11 least citing to testimony that's at least similar,</p> <p>12 but you'd have to show me in the report, because I'm</p> <p>13 not sure it's exactly the same. And I can certainly</p> <p>14 look in the report if you'd like.</p> <p>15 Q You might have stumped me there. Let's 12:44:58</p> <p>16 see.</p> <p>17 A And I can certainly tell you the basis for</p> <p>18 my hesitation.</p> <p>19 Q What's the basis for your hesitation?</p> <p>20 A I'm not sure if the quote is about EOS in 12:45:05</p> <p>21 general or the CLI.</p> <p>22 Q Well, that's a fair point.</p> <p>23 Do you think -- why don't I try to narrow</p> <p>24 the question.</p> <p>25 Do you think that -- strike that. 12:45:20</p> <p style="text-align: right;">Page 122</p>	<p>1 It's not clear what that question is asking. 12:47:17</p> <p>2 Q How long did you have to interact with the</p> <p>3 Arista EOS operating system to determine that its</p> <p>4 CLI has the same look and feel, in your opinion, as</p> <p>5 the IOS CLI? 12:47:40</p> <p>6 A I'm not sure I would agree with the</p> <p>7 predicate to that question. I didn't have to use it</p> <p>8 to determine that it had the same look and feel. I</p> <p>9 could do that based on other evidence that existed.</p> <p>10 I think, as I've testified to earlier, I 12:48:04</p> <p>11 have more experience configuring a Cisco router than</p> <p>12 I do an Arista router.</p> <p>13 But certainly in my experience in testing</p> <p>14 Arista routers, which extends back to the prior</p> <p>15 litigation, it's further evidence that would confirm 12:48:20</p> <p>16 my own opinion that the CLI has the same or similar</p> <p>17 look and feel.</p> <p>18 Q Are you telling me that you formed the</p> <p>19 opinion that the Arista CLI has the same or similar</p> <p>20 look and feel to Cisco's CLI without actually using 12:48:41</p> <p>21 the Arista CLI?</p> <p>22 A I don't know that I'm saying that. I</p> <p>23 don't think that there's a causal or a temporal</p> <p>24 relationship there.</p> <p>25 I think that you can determine that it has 12:48:58</p> <p style="text-align: right;">Page 124</p>
<p>1 Is it your opinion that the Arista EOS CLI 12:45:21</p> <p>2 has the same look and feel as the Cisco IOS CLI?</p> <p>3 A I believe that's correct, but I would</p> <p>4 defer to where I've discussed that opinion in my</p> <p>5 report. 12:45:41</p> <p>6 I think that there is deposition testimony</p> <p>7 or evidence that that was Arista's objective. And</p> <p>8 as I also testified to, I believe there's a sentence</p> <p>9 somewhere in the report that as part of my testing,</p> <p>10 I felt like the Arista CLI had the same look and 12:46:05</p> <p>11 feel as Cisco. And that includes both the commands,</p> <p>12 the output of the commands, the help descriptions,</p> <p>13 the modes, and more than just the command itself.</p> <p>14 Q Now, let me ask you the broader question.</p> <p>15 Is it your opinion that the Arista EOS 12:46:31</p> <p>16 operating system has the same look and feel as</p> <p>17 Cisco's IOS operating system?</p> <p>18 A I'm not sure what that question means.</p> <p>19 I'm not sure how an operating system would have a</p> <p>20 look and feel and to whom it would have a similar 12:46:52</p> <p>21 look and feel as opposed to, say, the CLI, which</p> <p>22 could be from a user perspective.</p> <p>23 Is it a user? They typically aren't</p> <p>24 exposed to the details of the operating system. Is</p> <p>25 it from a program or an architecture perspective? 12:47:14</p> <p style="text-align: right;">Page 123</p>	<p>1 the same look and feel based on what the 12:49:00</p> <p>2 documentation says. But certainly the fact that I</p> <p>3 did use the Arista CLI was another source of</p> <p>4 evidence that would confirm my opinion that the CLI</p> <p>5 has the same look and feel. 12:49:13</p> <p>6 Q When you did use the Arista CLI, could you</p> <p>7 tell right away that it had the same or a similar</p> <p>8 look and feel to the Cisco CLI?</p> <p>9 A Not sure what sort of time frame would be</p> <p>10 required for "right away." 12:49:34</p> <p>11 Q Within the first five minutes?</p> <p>12 A Certainly, maybe. I don't recall a</p> <p>13 specific point in time when there was the tripping</p> <p>14 of a threshold that said, "Oh, okay. This</p> <p>15 definitely has the same look and feel." 12:50:01</p> <p>16 But certainly from my experience in using</p> <p>17 the Arista switches, and this even goes back to</p> <p>18 testing I did in the '944 ITC hearing, that plugging</p> <p>19 in the Ethernet cable into the console port, booting</p> <p>20 it up, logging in, executing commands, were 12:50:25</p> <p>21 instances where the look and feel were very similar.</p> <p>22 Q What scientifically valid methodology did</p> <p>23 you use to determine whether Arista's EOS CLI and</p> <p>24 Cisco's IOS CLI have the same or a similar look and</p> <p>25 feel? 12:50:52</p> <p style="text-align: right;">Page 125</p>

<p>1 MR. HOLMES: Objection. Vague. 12:50:54</p> <p>2 THE WITNESS: Your question asks about</p> <p>3 scientifically valid. I think I've gone through the</p> <p>4 analysis that I used in the report. We can</p> <p>5 certainly step through that. 12:51:04</p> <p>6 From memory, it would be things like the</p> <p>7 similarity in the user manuals, the types of command</p> <p>8 and command expressions, the exec modes, the</p> <p>9 prompts, the output. You know, those as instances</p> <p>10 of logging into the router and being able to 12:51:28</p> <p>11 configure it and see information in very similar</p> <p>12 ways was, for me personally, as part of my</p> <p>13 evaluation, a determination that the look and feel</p> <p>14 was similar.</p> <p>15 And to the extent you have found 12:51:51</p> <p>16 paragraphs in the report that cite to the evidence,</p> <p>17 I think I go through all of that in the report as</p> <p>18 well.</p> <p>19 BY MR. SILBERT:</p> <p>20 Q Do you have any basis to assert that the 12:52:01</p> <p>21 methodology that you used to compare the look and</p> <p>22 feel of the EOS CLI and the IOS CLI is a</p> <p>23 scientifically valid one?</p> <p>24 MR. HOLMES: Objection. Vague, calls for</p> <p>25 a legal conclusion. 12:52:15</p> <p>Page 126</p>	<p>1 In some aspects, you look at the basic 12:53:58</p> <p>2 characteristics of the interface, and from an HCI</p> <p>3 design perspective, you get feedback to the user,</p> <p>4 and you allow the user to enter input.</p> <p>5 So it's really input from the user and 12:54:11</p> <p>6 output from the device. And you can look at those</p> <p>7 two aspects of the interface to determine</p> <p>8 similarities. And the existence of key similarities</p> <p>9 would be a basis for determining that the look and</p> <p>10 feel is consistent between two interfaces. 12:54:25</p> <p>11 BY MR. SILBERT:</p> <p>12 Q To your knowledge, has the methodology</p> <p>13 that you used to compare the look and feel of</p> <p>14 Cisco's and Arista's CLIs been published in any</p> <p>15 peer-reviewed journal? 12:54:42</p> <p>16 A I don't see why it wouldn't have been.</p> <p>17 Nothing specifically comes to mind.</p> <p>18 But the first place I would check would be</p> <p>19 to go look at my old HCI book from the mid '80s to</p> <p>20 see its description of the characteristics that 12:55:04</p> <p>21 would define a user interface, and then applying</p> <p>22 those to identify consistencies, or similarities and</p> <p>23 differences between two target interfaces.</p> <p>24 Q Do you know the name of that book?</p> <p>25 A I don't. It's been a few years. 12:55:21</p> <p>Page 128</p>
<p>1 THE WITNESS: Can you repeat the question? 12:52:23</p> <p>2 BY MR. SILBERT:</p> <p>3 Q Do you have any basis to assert that the</p> <p>4 methodology that you used to compare the look and</p> <p>5 feel of the EOS CLI and the IOS CLI is a 12:52:32</p> <p>6 scientifically valid methodology?</p> <p>7 MR. HOLMES: Same objections.</p> <p>8 THE WITNESS: Sure. First, I think I've</p> <p>9 gone through some of this discussion in my report</p> <p>10 But from the perspective of comparing an 12:52:51</p> <p>11 interface, the concepts of a look and feel for a</p> <p>12 particular interface are kinds of design concepts</p> <p>13 that were taught in the context of human computer</p> <p>14 interaction or HCI.</p> <p>15 And so the look has to go -- has to do 12:53:06</p> <p>16 with the physical appearance of the commands, the</p> <p>17 prompts, the output. The feel is in a similar vein,</p> <p>18 those kinds of concepts, and can also be judged</p> <p>19 based on the way that a user interacts with the</p> <p>20 interface, the commands that can be entered. 12:53:30</p> <p>21 Other characteristics of the interface</p> <p>22 might contribute to a conclusion that there's a look</p> <p>23 and feel. For example, the ability to use prefixes,</p> <p>24 or another option might be to extend the command by</p> <p>25 typing "tab." 12:53:53</p> <p>Page 127</p>	<p>1 Q Do you know the authors? 12:55:23</p> <p>2 A I do not.</p> <p>3 Q Do you know what the cover looks like?</p> <p>4 A No. No. It's only been about 30 years, I</p> <p>5 think. 12:55:38</p> <p>6 Q Is the assertion that two operating system</p> <p>7 interfaces have the same look and feel</p> <p>8 scientifically falsifiable?</p> <p>9 MR. HOLMES: Objection. Vague and calls</p> <p>10 for a legal conclusion. 12:55:53</p> <p>11 THE WITNESS: You asked about operating</p> <p>12 systems in that question?</p> <p>13 BY MR. SILBERT:</p> <p>14 Q Sure. I can narrow it to network device</p> <p>15 operating systems, if that's helpful. 12:56:00</p> <p>16 A My understanding in the line of questions</p> <p>17 was with respect to CLIs, and I know we had a little</p> <p>18 bit of a discussion earlier.</p> <p>19 And not to presume what you intended with</p> <p>20 your question, but my understanding would have been 12:56:16</p> <p>21 that you would have asked about CLIs as opposed to</p> <p>22 the operating systems.</p> <p>23 Q Sure. Well, I said "operating system</p> <p>24 interfaces," but I'm happy to narrow it.</p> <p>25 Is the assertion that two CLIs have the 12:56:27</p> <p>Page 129</p>

<p>1 same look and feel scientifically falsifiable? 12:56:30</p> <p>2 MR. HOLMES: Same objections.</p> <p>3 THE WITNESS: I suspect that there are</p> <p>4 situations where you can look at two interfaces and</p> <p>5 determine that they don't have the same look and 12:56:41</p> <p>6 feel.</p> <p>7 As an example, if you had a GUI versus a</p> <p>8 CLI, I think that it would be difficult to conclude</p> <p>9 that they have the same look and feel.</p> <p>10 There are other aspects of the CLI that 12:56:56</p> <p>11 one could identify as potentially distinctive. They</p> <p>12 have different outputs. They use different</p> <p>13 commands, command structures, or something.</p> <p>14 I think that you could certainly make an</p> <p>15 argument that the look and feel of two interfaces 12:57:14</p> <p>16 was not the same.</p> <p>17 BY MR. SILBERT:</p> <p>18 Q I understand you can make arguments. We</p> <p>19 get paid to do that.</p> <p>20 But my question to you is, is the 12:57:29</p> <p>21 assertion that two CLIs have the same look and feel</p> <p>22 scientifically falsifiable?</p> <p>23 MR. HOLMES: Same objections. Asked and</p> <p>24 answered.</p> <p>25 THE WITNESS: So if my previous answer 12:57:44</p> <p style="text-align: right;">Page 130</p>	<p>1 I don't know if that makes it subjective, 12:59:27</p> <p>2 or to the extent that it is subjective, whether,</p> <p>3 really, just about anything is not subjective.</p> <p>4 I've offered the opinions that I've</p> <p>5 offered in the report. And whether somebody wants 12:59:41</p> <p>6 to argue that they're subjective or objective, I</p> <p>7 guess that's their own subjective analysis.</p> <p>8 BY MR. SILBERT:</p> <p>9 Q What are the objective criteria that</p> <p>10 determine whether two CLIs have the same look and 12:59:56</p> <p>11 feel?</p> <p>12 A I think I've answered that question.</p> <p>13 The way to look at the criteria would be</p> <p>14 to assess its input mechanisms versus its output</p> <p>15 mechanisms, and either independently or together, 13:00:14</p> <p>16 perform an assessment of those aspects of the</p> <p>17 interface.</p> <p>18 And then within those aspects of the</p> <p>19 interface, you can really use a variety of both</p> <p>20 objective and subjective criteria, if I'm 13:00:32</p> <p>21 understanding how you're using the terms correctly.</p> <p>22 You can do things like a count of commands</p> <p>23 that are the same, similarities in the output, the</p> <p>24 structure of the commands. Any one or more of those</p> <p>25 things, depending on their similarity, would 13:00:55</p> <p style="text-align: right;">Page 132</p>
<p>1 wasn't answering the question to your expectation, 12:57:45</p> <p>2 then I'm not sure I understand what "scientifically</p> <p>3 falsifiable" mean.</p> <p>4 BY MR. SILBERT:</p> <p>5 Q Can it be proven wrong based on objective 12:57:56</p> <p>6 criteria?</p> <p>7 A You've introduced a concept of proof, and</p> <p>8 I understand that there are different burdens for</p> <p>9 proof. More likely than not, clear and convincing.</p> <p>10 It seems that what you're asking about is 12:58:27</p> <p>11 for, for example, an expert to make a determination.</p> <p>12 I believe an expert could make a</p> <p>13 determination and offer the opinion using some sort</p> <p>14 of methodology that two interfaces were -- had the</p> <p>15 same look and feels versus not, 12:58:47</p> <p>16 Q Is the determination of whether two CLIs</p> <p>17 have the same look and feel an objective</p> <p>18 determination or a subjective determination?</p> <p>19 MR. HOLMES: Objection. Vague, calls for</p> <p>20 a legal conclusion. 12:59:02</p> <p>21 THE WITNESS: I'm not sure that I could</p> <p>22 characterize it one way or another. I think that as</p> <p>23 with just about anything, two experts could look at</p> <p>24 the same evidence and disagree for their own</p> <p>25 specific reasons. 12:59:26</p> <p style="text-align: right;">Page 131</p>	<p>1 contribute to the overall conclusion of whether two 13:00:58</p> <p>2 interfaces have the same look and feel.</p> <p>3 Q Is there a minimum number of commands that</p> <p>4 need to be the same for two CLIs to have the same</p> <p>5 look and feel? 13:01:11</p> <p>6 A I don't think there has to be a minimum</p> <p>7 number. I think you have to consider all of the</p> <p>8 evidence. I don't think there's a threshold</p> <p>9 quantity.</p> <p>10 I think part of the analysis is to 13:01:23</p> <p>11 determine what the commands are and look at the</p> <p>12 similarities in commands. There might be other</p> <p>13 considerations like the similarities in command</p> <p>14 hierarchies, the similarity in output.</p> <p>15 Certainly there might be a hypothetical 13:01:42</p> <p>16 situation where many of the commands are similar,</p> <p>17 but the output is so distinctively different that it</p> <p>18 creates something that's different with respect to</p> <p>19 the look and feel.</p> <p>20 I mean, it seems that part of the analysis 13:01:56</p> <p>21 has to be based on the evidence that's available to</p> <p>22 do the analysis.</p> <p>23 Q Could two CLIs have the same look and feel</p> <p>24 if they have no overlapping multiword commands?</p> <p>25 MR. HOLMES: Objection. Calls for a 13:02:11</p> <p style="text-align: right;">Page 133</p>

<p>1 hypothetical. 13:02:13</p> <p>2 THE WITNESS: As a hypothetical, I'm</p> <p>3 always adverse to saying that it's not possible</p> <p>4 It might be more difficult in the case</p> <p>5 where there's no overlapping commands. I don't know 13:02:28</p> <p>6 what other aspects of the system might contribute to</p> <p>7 a conclusion that there's the same look and feel.</p> <p>8 If it's a graphical interface and it's</p> <p>9 identical but the commands have slightly different</p> <p>10 names, or the output is identical -- and the output 13:02:49</p> <p>11 is identical, maybe those -- those considerations</p> <p>12 have an impact on whether it's the same look and</p> <p>13 feel.</p> <p>14 BY MR. SILBERT:</p> <p>15 Q Do two CLIs need to have the same modes 13:03:02</p> <p>16 and prompts for them to have the same look and feel?</p> <p>17 MR. HOLMES: Objection. Calls for a legal</p> <p>18 conclusion, incomplete hypothetical.</p> <p>19 THE WITNESS: I think it's a similar</p> <p>20 answer to what I just said. I think it depends. 13:03:15</p> <p>21 You have to look at the evidence that's presented in</p> <p>22 order to make a determination. It depends on the</p> <p>23 other factors I've talked about and the degree to</p> <p>24 which the other factors are present. It really just</p> <p>25 depends. It might be, it might not be. 13:03:41</p> <p>Page 134</p>	<p>1 determining the similarity between look and feel. 13:05:14</p> <p>2 Q To your knowledge, was that characteristic</p> <p>3 common to CLIs that existed before both Cisco and</p> <p>4 Arista?</p> <p>5 A As to your question of "common," I'm not 13:05:29</p> <p>6 sure what -- how prevalent it would need to be in</p> <p>7 order to make it common.</p> <p>8 And then you've also identified before</p> <p>9 Cisco and Arista CLIs, which are two different</p> <p>10 dates. I'm not sure which date you're intending. 13:05:45</p> <p>11 Q To your knowledge, did the TOPS-20 CLI</p> <p>12 allow a user to enter prefixes that would be</p> <p>13 expanded to complete commands or command words?</p> <p>14 MR. HOLMES: Objection. Vague as to time,</p> <p>15 foundation. 13:06:05</p> <p>16 THE WITNESS: I have some recollection</p> <p>17 that -- something around that topic. I'd have to go</p> <p>18 back and look at the reports to see if it did or</p> <p>19 not.</p> <p>20 BY MR. SILBERT: 13:06:25</p> <p>21 Q You also mentioned tab expansion as</p> <p>22 something that can affect the look and feel of a</p> <p>23 CLI; is that right?</p> <p>24 A Again, I offered a whole list of examples.</p> <p>25 It could be something that one could use 13:06:39</p> <p>Page 136</p>
<p>1 BY MR. SILBERT: 13:03:43</p> <p>2 Q When you refer to "other factors" that are</p> <p>3 talked about, some of the other factors you talked</p> <p>4 about is, other characteristics of the interface</p> <p>5 were the use of prefixes; is that correct? 13:03:58</p> <p>6 A I did mention the context of a prefix in a</p> <p>7 previous answer.</p> <p>8 Q And what did you mean when you referred to</p> <p>9 the use of prefixes as something that affects the</p> <p>10 look and feel of a CLI? 13:04:16</p> <p>11 A Sure. So one example might be in, say,</p> <p>12 Cisco and Arista where you're able to enter the</p> <p>13 prefix "EN" for enable instead of entering the full</p> <p>14 command, so the design concept within both user</p> <p>15 interfaces where you're able to enter just enough of 13:04:32</p> <p>16 the command so that the CLI can distinguish,</p> <p>17 disambiguate between commands.</p> <p>18 So since there's no other command that</p> <p>19 begins with EN, that EN is sufficient to notify the</p> <p>20 system that the user wants to go into privileged 13:04:52</p> <p>21 mode.</p> <p>22 And so that concept of entering a minimum</p> <p>23 syntactic length to disambiguate over other commands</p> <p>24 is a characteristic that's common to Cisco and</p> <p>25 Arista, and is a factor that I've considered in 13:05:11</p> <p>Page 135</p>	<p>1 consistently across interfaces that might be a 13:06:44</p> <p>2 consideration. Not necessarily so, but maybe.</p> <p>3 Q Are the tab expansion characteristics in</p> <p>4 Cisco's and Arista's CLI similar?</p> <p>5 A I don't recall. I'd have to go back and 13:06:58</p> <p>6 check to the extent that they're there and how</p> <p>7 similar they are. I don't have that detail of both</p> <p>8 of the CLIs memorized.</p> <p>9 Q Is the availability of context-sensitive</p> <p>10 help a characteristic that affects a CLI's look and 13:07:20</p> <p>11 feel?</p> <p>12 MR. HOLMES: Objection. Vague.</p> <p>13 THE WITNESS: I'm not sure exactly what</p> <p>14 you mean by "context-sensitive help."</p> <p>15 BY MR. SILBERT: 13:07:38</p> <p>16 Q For example, pushing "question mark," and</p> <p>17 the CLI interface will return information that it</p> <p>18 thinks is relevant based on the particular context</p> <p>19 in which you pushed the question mark.</p> <p>20 A It's not clear from your question if 13:07:53</p> <p>21 you're entering a question mark after you've entered</p> <p>22 a portion of a command, and then you want to see,</p> <p>23 for example, the options that are available in the</p> <p>24 subtree of that command.</p> <p>25 Q Sure. Why don't you take that example. 13:08:05</p> <p>Page 137</p>

<p>1 A Okay. It could be. It could be one of 13:08:07 2 the factors that one would consider or would go into 3 consideration for look and feel, in combination with 4 other factors that established similarities. 5 Q Does the ability to navigate with the 13:08:23 6 cursor on the screen using up and down arrows affect 7 the look and feel of a CLI? 8 MR. HOLMES: Objection. Vague, calls for 9 a legal conclusion. 10 THE WITNESS: Does it affect it? Does it 13:08:40 11 affect the look and feel? It depends. It depends 12 on what your criteria for evaluation is. Whether 13 it's a distinction that makes a difference in the 14 context of evaluating it, I mean, it depends. 15 BY MR. SILBERT: 13:09:04 16 Q I'm asking you based on your criteria that 17 you use. 18 A I'm not sure I understand the question. 19 The answer is still, it depends. It depends on, in 20 the context of evaluating a look and feel, whether 13:09:17 21 it's a significant difference, whether there are 22 other factors that establish the look and feel to 23 the degree to which navigating with the up and down 24 key is a significant difference. 25 Q Does the ability to use a shortcut like 13:09:44</p> <p style="text-align: right;">Page 138</p>	<p>1 BY MR. SILBERT: 13:11:17 2 Q In a situation where there are certain 3 characteristics of CLIs that are the same and other 4 characteristics that are different, how, using your 5 methodology that you applied in this case, do you 13:11:31 6 determine whether the look and feel of the two CLIs 7 is the same? 8 MR. HOLMES: Objection. Vague and calls 9 for a legal conclusion and incomplete hypothetical. 10 THE WITNESS: It would depend on the 13:11:54 11 situation. It would depend on the degree to which 12 there were similarities and differences. It would 13 depend on, I mean, how different the differences 14 are, how similar the similarities are. 15 BY MR. SILBERT: 13:12:12 16 Q Right. I understand that. 17 But my question is, what -- can you 18 explain to me the criteria that a person would apply 19 in order to make the determination of whether the 20 look and feel of two CLIs is the same when some 13:12:25 21 characteristics of the CLIs are similar and some 22 characteristics are different? 23 MR. HOLMES: Same objection, and compound 24 THE WITNESS: Well, I think I've described 25 the methodology earlier. You can divide it up into 13:12:39</p> <p style="text-align: right;">Page 140</p>
<p>1 Control A to move the cursor to the beginning of a 13:09:47 2 line affect the look and feel of a CLI? 3 MR. HOLMES: Objection. Vague, incomplete 4 hypothetical. 5 THE WITNESS: It depends. I think with 13:10:02 6 answers to other examples, it depends. 7 If that's the only difference, or there's 8 other overriding characteristics, you have to look 9 at the different factors that are present and 10 evaluate whether or not there is a difference there. 13:10:24 11 BY MR. SILBERT: 12 Q Does the terminal length affect the look 13 and feel of a CLI? 14 MR. HOLMES: Objection. Foundation, 15 vague, incomplete hypothetical. 13:10:36 16 THE WITNESS: I'm not sure what you mean 17 by "terminal length." 18 BY MR. SILBERT: 19 Q Whether the display shows, say, 20 lines 20 or 40 lines at a time. 13:10:45 21 MR. HOLMES: Same objections. 22 THE WITNESS: It depends. The difference 23 between 20 versus 19, likely not, for example. 24 Again, it depends. But, say, the difference between 25 80 versus one might have more of an impact. 13:11:12</p> <p style="text-align: right;">Page 139</p>	<p>1 input versus output. There's design characteristics 13:12:42 2 of the interface. And you have essentially a 3 multivariate problem, and you have similarities and 4 differences for each of the potential 5 characteristics. 13:12:57 6 The characteristics might vary between a 7 graphical user interface versus a command line 8 interface. It's not -- I don't know that I can sit 9 here and delineate all of the possible 10 characteristics or factors you would have to 13:13:12 11 evaluate in determining the similarity or the look 12 and feel. 13 But what I can tell you about the 14 methodology is that there are generally a set of 15 characteristics you would consider. And as I've 13:13:25 16 done in this case where you look at commands, 17 command structures, similarities in commands, 18 similarities in the structure of commands, the way 19 commands are input, the prompts, the modes, the 20 output, the help descriptions, intended design based 13:13:42 21 on testimony, the evidence about what customers are 22 looking for, in the report, there really is a whole 23 significant amount of evidence that establishes both 24 a goal of Arista and a desire of its customers. I 25 think those are criteria that go into my evaluation 13:14:09</p> <p style="text-align: right;">Page 141</p>

<p>1 as well and evidence that I've considered. 13:14:12</p> <p>2 So once you have a set of factors, I think</p> <p>3 you can look at those similarities, and potentially</p> <p>4 any differences, and determine, based on the</p> <p>5 totality of the evidence, that there exists or 13:14:27</p> <p>6 doesn't exist a similarity in the look and feel</p> <p>7 BY MR. SILBERT:</p> <p>8 Q Can you give me any formula or algorithm</p> <p>9 that is used to solve what you describe as a</p> <p>10 multivariate problem where some elements are similar 13:14:41</p> <p>11 and some elements are different?</p> <p>12 MR. HOLMES: Objection. Vague.</p> <p>13 THE WITNESS: I don't know that I can give</p> <p>14 you a formula, specifically. I don't think a</p> <p>15 formula is required as part of the methodology. I 13:14:54</p> <p>16 think I've described the methodology numerous times.</p> <p>17 To the extent you would weight one</p> <p>18 characteristic versus another, I think I've already</p> <p>19 testified that it depends on the degree of</p> <p>20 similarity or the degree of differences. 13:15:12</p> <p>21 If you have what amounts to significant</p> <p>22 differences in a particular aspect, to the point</p> <p>23 where it detracts from a sense of consistency or</p> <p>24 similarity, then that would rise to the level of</p> <p>25 being distinctive. 13:15:30</p> <p style="text-align: right;">Page 142</p>	<p>1 systems, and evaluated all of that information to 13:16:49</p> <p>2 reach my conclusions.</p> <p>3 Q Do you disclose anywhere in your reports</p> <p>4 how much you weight each factor that you assert as</p> <p>5 similar or different in reaching your conclusion 13:17:04</p> <p>6 that the two CLIs have the same or a similar look</p> <p>7 and feel?</p> <p>8 MR. HOLMES: Objection. Vague.</p> <p>9 THE WITNESS: I don't believe that there</p> <p>10 is a specific weighting that needs to be identified. 13:17:20</p> <p>11 I don't think that that's a requirement for using a</p> <p>12 rigorous methodology to reach the conclusion.</p> <p>13 And I think my report speaks for itself as</p> <p>14 to the evidence that I've relied on and my own</p> <p>15 analysis to confirm this concept that the look and 13:17:40</p> <p>16 feel between the interfaces of Arista and Cisco are</p> <p>17 the same.</p> <p>18 BY MR. SILBERT:</p> <p>19 Q To determine whether two interfaces have</p> <p>20 the same look and feel, do you need to know whether 13:17:51</p> <p>21 users would have difficulty distinguishing one from</p> <p>22 the other?</p> <p>23 MR. HOLMES: Objection. Vague, calls for</p> <p>24 speculation.</p> <p>25 THE WITNESS: It depends. As a 13:18:06</p> <p style="text-align: right;">Page 144</p>
<p>1 And I think, ultimately, in this case, 13:15:33</p> <p>2 that the bar is -- there isn't really a particular</p> <p>3 question around look and feel. I mean, if you look</p> <p>4 at the totality of the evidence as I have, it's not</p> <p>5 difficult to conclude that the look and feel are 13:15:47</p> <p>6 actually quite similar.</p> <p>7 BY MR. SILBERT:</p> <p>8 Q Is it just a question of you know it when</p> <p>9 you see it?</p> <p>10 A No, I don't think it's a question of you 13:15:59</p> <p>11 know it when you see it. And I think that the</p> <p>12 testimony I've given over the last half an hour or</p> <p>13 so demonstrates that I've described what the process</p> <p>14 is or the methodology that I would follow.</p> <p>15 And I think that it's also described in my 13:16:14</p> <p>16 report, and there's additional evidence in my report</p> <p>17 that goes to support my opinions and conclusions on</p> <p>18 the question of look and feel.</p> <p>19 Q In forming your opinions on look and feel,</p> <p>20 did you make a list of the differences between the 13:16:29</p> <p>21 Cisco CLI and the Arista CLI?</p> <p>22 A I don't recall specifically making a list</p> <p>23 of differences. Certainly as part of my evaluation,</p> <p>24 I considered all of the evidence, including what the</p> <p>25 manuals say and my own experiences in the operating 13:16:45</p> <p style="text-align: right;">Page 143</p>	<p>1 hypothetical, I think it's fairly incomplete. It 13:18:09</p> <p>2 depends on what the two systems are.</p> <p>3 The fact that users do have trouble</p> <p>4 distinguishing between the two interfaces could be</p> <p>5 supportive of a determination that the look and feel 13:18:22</p> <p>6 is the same.</p> <p>7 But at the same time, depending on the</p> <p>8 other factors, depending on the other evidence,</p> <p>9 somebody might be able to determine that they are</p> <p>10 using a different CLI but still be able to establish 13:18:43</p> <p>11 that they have the same look and feel.</p> <p>12 BY MR. SILBERT:</p> <p>13 Q Did you do any type of survey to determine</p> <p>14 whether actual users have difficulty determining</p> <p>15 whether they're using a Cisco switch or an Arista 13:18:55</p> <p>16 switch?</p> <p>17 A I didn't conduct my own survey. The</p> <p>18 evidence that I've relied on is in the report that</p> <p>19 I've cited to, and I think it really goes to what</p> <p>20 Arista has said, what their objectives were, as 13:19:11</p> <p>21 their witnesses have testified to.</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 I think there's a lot of evidence in the 13:19:27</p> <p style="text-align: right;">Page 145</p>

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<p>1 Is one of the things that you assert that 17:05:45</p> <p>2 the names of the modes were copied? I thought you</p> <p>3 said previously that it was. I'm just trying to be</p> <p>4 methodical about it.</p> <p>5 A I mean, paragraph 180 talks about the 17:05:59</p> <p>6 asserted command modes and prompts. I think it's</p> <p>7 the copying of the command mode itself.</p> <p>8 I'm referencing numerous Arista documents</p> <p>9 also citing -- I mean, the user manual image that's</p> <p>10 identified after paragraph 180 identifies what those 17:06:30</p> <p>11 modes are, including both the names of the modes and</p> <p>12 the characteristics of what those modes include,</p> <p>13 their functionality and their role.</p> <p>14 And I think if you compare that to what's</p> <p>15 described on page 18 through 20, so for example, 17:06:46</p> <p>16 after paragraph 62 that talks about what those modes</p> <p>17 are, how the modes can be used, that's at least part</p> <p>18 of the concept of defining what the modes are that</p> <p>19 have been copied.</p> <p>20 I'm not sure how to describe it any other 17:07:11</p> <p>21 way than it's the modes and the prompts.</p> <p>22 Q Okay. Looking at -- well, in any of these</p> <p>23 places where you show the prompts, maybe the easiest</p> <p>24 place is in your Exhibit 4, the prompt you list is</p> <p>25 "router," angle bracket, right, for -- I'm looking 17:07:35</p> <p style="text-align: right;">Page 274</p>	<p>1 the user would see whatever name the user actually 17:09:14</p> <p>2 assigned to that particular switch to name it,</p> <p>3 right? And then an angle bracket?</p> <p>4 A It could be. So if you had two -- two</p> <p>5 devices that had the same name, they would be the 17:09:27</p> <p>6 identical prompt.</p> <p>7 Q You mean a Cisco device and an Arista</p> <p>8 device?</p> <p>9 A Correct.</p> <p>10 Q But if a person named the devices, had two 17:09:37</p> <p>11 switches in their network and named them</p> <p>12 differently, then they would see the name of the</p> <p>13 Cisco device, switch number 37, angle bracket, and</p> <p>14 then they'd see the name of the Arista device,</p> <p>15 switch number 82, angle bracket, right? 17:09:54</p> <p>16 A So the convention would be the same, but</p> <p>17 the name might be different. And you would still</p> <p>18 have the angle bracket as identifying what the mode</p> <p>19 is. And the context of the other modes is the</p> <p>20 aspect that's being copied from Cisco to Arista. 17:10:14</p> <p>21 Q Okay. Could you look, please, at page 35</p> <p>22 of your opening report?</p> <p>23 A Okay.</p> <p>24 Q And I'm probably more interested in</p> <p>25 page 36. But I want to direct your attention to 17:10:57</p> <p style="text-align: right;">Page 276</p>
<p>1 on page 1. And then the prompt for the -- what you 17:07:39</p> <p>2 call the identical or similar Arista prompt is</p> <p>3 "switch," angle bracket, right?</p> <p>4 A That's what I've identified as the -- as</p> <p>5 an example. 17:07:49</p> <p>6 Q Okay. That's just an example.</p> <p>7 A Well, it's generally -- for example, what</p> <p>8 the host name would be, the convention is you can</p> <p>9 include what the host name would be as part of</p> <p>10 identifying what the prompt is. And that's in the 17:08:00</p> <p>11 context of also using both the angle bracket, and</p> <p>12 also the hash key, to distinguish between which mode</p> <p>13 you're in, and then as well as the use of the</p> <p>14 parenthetical for config, and then also whether it's</p> <p>15 config, and then dash, and then the description or 17:08:24</p> <p>16 name of the interface.</p> <p>17 And so it's that concept of the prompts</p> <p>18 and the use of the prompts to distinguish between</p> <p>19 the other modes. And what's specifically being</p> <p>20 copied is that -- is that prompt itself. 17:08:47</p> <p>21 Q And just looking at the prompts on page 1</p> <p>22 where it says "router" and "switch," I think you</p> <p>23 said this, but in actual operation, the prompt that</p> <p>24 the user sees, it wouldn't say, "switch," angle</p> <p>25 bracket, right? It would be -- in normal operation, 17:09:11</p> <p style="text-align: right;">Page 275</p>	<p>1 paragraph 83, which starts at -- on page 35. 17:11:02</p> <p>2 Do you see that?</p> <p>3 A I do.</p> <p>4 Q And feel free to read the whole paragraph.</p> <p>5 But what you say at the end of the paragraph is, 17:11:15</p> <p>6 "This process continues recursively until either the</p> <p>7 parsing engine fails at the root mode," and it goes</p> <p>8 on from there and explains. And then it says, "In</p> <p>9 my opinion, this is non-standard behavior, and it is</p> <p>10 present in both Cisco and Arista programs that I 17:11:35</p> <p>11 have inspected."</p> <p>12 Do you see that?</p> <p>13 A I do.</p> <p>14 Q What's the significance of your pointing</p> <p>15 out that in your opinion, this is non-standard 17:11:47</p> <p>16 behavior, and it's present in both Cisco and Arista?</p> <p>17 A So this goes to the copying of the code as</p> <p>18 part of the parsing engine. And what's being copied</p> <p>19 here is the source code that implements the process</p> <p>20 that continues -- that performs the parsing. So 17:12:14</p> <p>21 it's the source code itself.</p> <p>22 And what's being described is that there</p> <p>23 are certain telltale aspects of the code that are,</p> <p>24 in this case, non-standard. There's a couple of</p> <p>25 other ones that are identified as non-standard as 17:12:33</p> <p style="text-align: right;">Page 277</p>

<p>1 well. 17:12:35</p> <p>2 And when you look at those together, it's</p> <p>3 indicative of copying the source code that embodies</p> <p>4 that process.</p> <p>5 Q Really? 17:12:48</p> <p>6 So what you're trying to suggest here is</p> <p>7 that you think that Arista would have copied Cisco's</p> <p>8 parser source code?</p> <p>9 A I think it's the opinion that I'm</p> <p>10 expressing in this section. 17:13:01</p> <p>11 Q Okay. And earlier today when we were</p> <p>12 talking about plagiarism, you told me that it's</p> <p>13 important to be really careful and not just look at</p> <p>14 a similarity before you -- and look at more</p> <p>15 information before you would make an allegation of 17:13:14</p> <p>16 copying, right?</p> <p>17 I'm paraphrasing, but you remember what</p> <p>18 I'm talking about?</p> <p>19 A I do remember that testimony, and that's</p> <p>20 exactly what I'm doing, is, beyond the source code 17:13:22</p> <p>21 similarities, you look for the telltale fingerprint</p> <p>22 of implementing something in the same way.</p> <p>23 So when you see something that's</p> <p>24 non-standard -- for example, the other example is,</p> <p>25 if you copy the text and you happen to have copied a 17:13:41</p> <p style="text-align: right;">Page 278</p>	<p>1 opinion, this is non-standard behavior," right, with 17:15:11</p> <p>2 no citation to any data?</p> <p>3 MR. HOLMES: Objection. Argumentative.</p> <p>4 THE WITNESS: I mean, it's what my opinion</p> <p>5 is based on my experience in programming parsers. 17:15:19</p> <p>6 BY MR. SILBERT:</p> <p>7 Q Are we just supposed to take your word for</p> <p>8 it?</p> <p>9 MR. HOLMES: Objection. Argumentative.</p> <p>10 THE WITNESS: I think you can disagree 17:15:27</p> <p>11 with that opinion, but it's what my opinion is</p> <p>12 BY MR. SILBERT:</p> <p>13 Q Of the 40, at least, switch vendors in</p> <p>14 this industry, how many of them do it in the way</p> <p>15 that's listed in -- described in paragraph 83 and 17:15:40</p> <p>16 how many do it a different way?</p> <p>17 MR. HOLMES: Objection. Compound, vague.</p> <p>18 THE WITNESS: For this particular aspect,</p> <p>19 I haven't had access or looked at the way the</p> <p>20 different vendors implement it. But it's a question 17:15:54</p> <p>21 of how you're parsing commands. It's not specific</p> <p>22 or limited to the way that switch vendors perform</p> <p>23 that kind of processing.</p> <p>24 BY MR. SILBERT:</p> <p>25 Q How many parsers in use in the United 17:16:07</p> <p style="text-align: right;">Page 280</p>
<p>1 grammatical error, that's indication of something 17:13:46</p> <p>2 that's non-standard.</p> <p>3 So in this instance, when you look across</p> <p>4 the section, in the way that the parsing is</p> <p>5 happening, there are particular aspects of it that 17:13:59</p> <p>6 are non-standard and demonstrates the similarities</p> <p>7 between the way that the parsing happens in both EOS</p> <p>8 and IOS.</p> <p>9 Q What's your basis for asserting that this</p> <p>10 feature that you describe in paragraph 83 is, as you 17:14:17</p> <p>11 put it, non-standard?</p> <p>12 A It's not the typical way that you would do</p> <p>13 the kind of rule-matching that's described in the</p> <p>14 two parsing systems.</p> <p>15 Q How do you know? 17:14:35</p> <p>16 A Based on my expertise in how you can</p> <p>17 program parsers.</p> <p>18 Q What data do you provide to us for us to</p> <p>19 make any kind of independent assessment of whether</p> <p>20 this behavior is, as you put it, non-standard? 17:14:48</p> <p>21 A I think what's included in the report. I</p> <p>22 mean, it's a description of what that processing is.</p> <p>23 I'm not sure what else --</p> <p>24 Q With respect to its standard or</p> <p>25 non-standard character, all you say is, "In my 17:15:08</p> <p style="text-align: right;">Page 279</p>	<p>1 States do it the way that's described in 17:16:10</p> <p>2 paragraph 83 and how many do it a different way?</p> <p>3 MR. HOLMES: Same objections.</p> <p>4 THE WITNESS: I don't think that I need to</p> <p>5 undertake that level of analysis. 17:16:20</p> <p>6 The way that you phrased it, it seems</p> <p>7 fairly impossible to collect that data and make that</p> <p>8 assessment. So I'm using my experience in parsing</p> <p>9 and the way that it was taught as part of language</p> <p>10 processing and grammars as part of computer science, 17:16:39</p> <p>11 and how I've seen it used and applied over the</p> <p>12 course of my career.</p> <p>13 BY MR. SILBERT:</p> <p>14 Q Okay. Do you know who designed the</p> <p>15 feature of the Arista parser that you are now 17:17:01</p> <p>16 saying, in your opinion, was copied from Cisco</p> <p>17 parser code?</p> <p>18 A I don't recall off the top of my head who</p> <p>19 that was</p> <p>20 Q Did you ever know? 17:17:11</p> <p>21 A I might have. I don't recall, sitting</p> <p>22 here today, if I knew it or not.</p> <p>23 Q Did you ask?</p> <p>24 A I don't recall if I asked or knew it, or</p> <p>25 who it might have been. 17:17:24</p> <p style="text-align: right;">Page 281</p>

<p>1 Q Do you have any reason to believe that 17:17:25</p> <p>2 that person, whoever he or she was, actually knew</p> <p>3 how Cisco's parser code worked when he or she</p> <p>4 designed this feature in Arista's parser?</p> <p>5 MR. HOLMES: Objection. Vague, compound. 17:17:38</p> <p>6 THE WITNESS: Well, to the extent that it</p> <p>7 was one person or one person only, whether they had</p> <p>8 access to Cisco's code or knew how Cisco worked</p> <p>9 specifically, I don't recall having any additional</p> <p>10 details on what that was. 17:17:54</p> <p>11 BY MR. SILBERT:</p> <p>12 Q Wouldn't you need to know that before you</p> <p>13 accuse a company of copying another company's source</p> <p>14 code?</p> <p>15 MR. HOLMES: Objection. Argumentative. 17:18:02</p> <p>16 THE WITNESS: No, for the reasons that</p> <p>17 I've laid out in the report; that you can look for</p> <p>18 telltale signs of non-standard similarities. I</p> <p>19 think that that, at least in this particular</p> <p>20 instance, is evidence. 17:18:14</p> <p>21 BY MR. SILBERT:</p> <p>22 Q So this -- what you describe in</p> <p>23 paragraph 83 is sufficient for you to accuse Arista</p> <p>24 of copying Cisco's source code, but the fact that</p> <p>25 Dell might use more than 1,000 multiword CLI 17:18:31</p> <p>Page 282</p>	<p>1 BY MR. SILBERT: 17:28:46</p> <p>2 Q Dr. Almeroth, do you still have your</p> <p>3 report open to page 36?</p> <p>4 A Yes.</p> <p>5 Q Can you look, please, at paragraph 84? 17:28:51</p> <p>6 And again, please feel free to read the</p> <p>7 whole paragraph to yourself, but I'll just focus on</p> <p>8 the last sentence where you say, "In my opinion,</p> <p>9 this," referring to behavior that you described in</p> <p>10 the Arista parser, "is similar to the end of line 17:29:09</p> <p>11 tokens that some of Cisco's parsers use."</p> <p>12 Do you see that?</p> <p>13 A I do.</p> <p>14 Q And is it your opinion that using an end</p> <p>15 token in a parser is unique to Cisco? 17:29:23</p> <p>16 A It's not just the end of line tokens, it's</p> <p>17 the "this" and the reference to the tokens as</p> <p>18 similar as to what's described in the rest of the</p> <p>19 paragraph.</p> <p>20 So I don't think it's just limited to a 17:29:48</p> <p>21 similarity in the end of line tokens as it is in the</p> <p>22 processing of those tokens and the elimination of</p> <p>23 the matching rules, and then sort of the description</p> <p>24 that's included in all of paragraph 84.</p> <p>25 Q Are you asserting that Arista copied the 17:30:09</p> <p>Page 284</p>
<p>1 commands in common with Cisco is, in your opinion. 17:18:36</p> <p>2 not enough indication for you to think that Dell</p> <p>3 might have copied Cisco?</p> <p>4 A First of all, I think that those are --</p> <p>5 you have not properly included all of the analysis 17:18:49</p> <p>6 that I've identified in this section. You</p> <p>7 identified paragraph 83. This extends for several</p> <p>8 pages. At least onto the next page, there's</p> <p>9 additional paragraphs. It identifies additional</p> <p>10 points of relevance with respect to the way the 17:19:10</p> <p>11 implementations were coded.</p> <p>12 And I think that the distinction with</p> <p>13 respect to what Arista has done in the context of</p> <p>14 all of the evidence of copying, and in light of this</p> <p>15 particular evidence, is completely different and 17:19:27</p> <p>16 quite overwhelming as compared to a comparison of</p> <p>17 the commands alone in the instance of Dell.</p> <p>18 MR. SILBERT: Okay. We need to change the</p> <p>19 tape.</p> <p>20 THE VIDEO OPERATOR: Going off the record, 17:19:41</p> <p>21 the time is 5:20 p.m.</p> <p>22 (Recess, 5:20 p.m. - 5:29 p.m.)</p> <p>23 THE VIDEO OPERATOR: Back on the record.</p> <p>24 The time is 5:29 p.m.</p> <p>25 /// 17:28:43</p> <p>Page 283</p>	<p>1 feature you describe in paragraph 84 from Cisco's 17:30:12</p> <p>2 source code?</p> <p>3 A I believe that that's what this section of</p> <p>4 the report is saying.</p> <p>5 Q And again, how many -- what data do you 17:30:22</p> <p>6 provide in your report on how many parsers use the</p> <p>7 feature that you describe in paragraph 84?</p> <p>8 A Do you mean along the same lines that</p> <p>9 you asked earlier with respect to how many parsers</p> <p>10 of different networking vendors, or how many parsers 17:30:46</p> <p>11 in the entire U.S. calculations -- I mean, is</p> <p>12 that --</p> <p>13 Q Any -- I don't think you have any data at</p> <p>14 all, so I don't think it matters.</p> <p>15 But tell me any data at all that you have 17:31:00</p> <p>16 on parsers -- how many parsers do or don't use the</p> <p>17 feature that you describe in paragraph 84.</p> <p>18 MR. HOLMES: Objection. Argumentative to</p> <p>19 the first part of the question.</p> <p>20 MR. SILBERT: I'll give you that one. 17:31:13</p> <p>21 THE WITNESS: So it's based on my</p> <p>22 experience in the use of parsers and the design of</p> <p>23 parsers and the way that they operate, that there</p> <p>24 are many different ways of implementing parsing</p> <p>25 functionality. 17:31:26</p> <p>Page 285</p>

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<p>1 [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 [REDACTED]</p> <p>16 [REDACTED]</p> <p>17 [REDACTED]</p> <p>18 [REDACTED]</p> <p>19 [REDACTED]</p> <p>20 [REDACTED]</p> <p>21 [REDACTED]</p> <p>22 [REDACTED]</p> <p>23 [REDACTED]</p> <p>24 [REDACTED]</p> <p>25 [REDACTED]</p> <p>Page 290</p>	<p>1 A No, not who the particular person is, or 17:39:47</p> <p>2 at least I don't recall who they are, sitting here</p> <p>3 today.</p> <p>4 Q Do Cisco's parsers really support the add</p> <p>5 command feature? 17:39:57</p> <p>6 A I'm not sure where you're --</p> <p>7 Q You refer to -- do you see your</p> <p>8 reference almost at the end of paragraph 86, "add</p> <p>9 command"?</p> <p>10 A I think what I'm describing here is the 17:40:47</p> <p>11 concept of this feature, and this feature is with</p> <p>12 respect to the way that the different token types</p> <p>13 are being processed, not with respect to the</p> <p>14 specific existence of the add command from EOS.</p> <p>15 Q Do you have any reason to assert that 17:41:03</p> <p>16 whoever it was that introduced this feature into</p> <p>17 Arista's parser knew how Cisco's parser behaved when</p> <p>18 he or she did so?</p> <p>19 A Not that I recall, sitting here today.</p> <p>20 Q Have you identified, with respect to any 17:41:18</p> <p>21 of these similarities in paragraphs 83 through 86,</p> <p>22 any similarity in the expression of the -- within</p> <p>23 the source code itself between Arista and Cisco of</p> <p>24 these functions?</p> <p>25 A I'm not -- 17:41:36</p> <p>Page 292</p>
<p>1 [REDACTED]</p> <p>2 [REDACTED]</p> <p>3 [REDACTED]</p> <p>4 [REDACTED]</p> <p>5 [REDACTED]</p> <p>6 [REDACTED]</p> <p>7 [REDACTED]</p> <p>8 [REDACTED]</p> <p>9 [REDACTED]</p> <p>10 [REDACTED]</p> <p>11 [REDACTED]</p> <p>12 [REDACTED]</p> <p>13 [REDACTED]</p> <p>14 [REDACTED]</p> <p>15 Q Do you know who introduced the feature you 17:39:15</p> <p>16 describe in paragraph 85 into Arista's parser?</p> <p>17 A I don't recall, as I sit here today.</p> <p>18 Q Do you have any reason to assert that that</p> <p>19 person knew how Cisco's parser behaved when that --</p> <p>20 when he or she introduced this feature into Arista's 17:39:31</p> <p>21 parser?</p> <p>22 A Not as I recall, sitting here, no.</p> <p>23 Q Do you know who introduced the feature</p> <p>24 that you describe in paragraph 86 into Arista's</p> <p>25 parser? 17:39:45</p> <p>[REDACTED]</p>	<p>1 MR. HOLMES: Objection. Vague. 17:41:37</p> <p>2 THE WITNESS: -- sure I understand the</p> <p>3 question, what you mean by "expression."</p> <p>4 BY MR. SILBERT:</p> <p>5 Q How the source code is actually written to 17:41:42</p> <p>6 implement the functions that you describe in these</p> <p>7 paragraphs 83 through 86.</p> <p>8 A Well, there are different languages. But</p> <p>9 beyond the descriptions of the functionality that</p> <p>10 I've included in this section, I haven't done a 17:41:56</p> <p>11 lower-level detail analysis between the two.</p> <p>12 But I've certainly identified the</p> <p>13 functional similarities and the parts that are</p> <p>14 specific to the two different parsers.</p> <p>15 MR. SILBERT: Okay. Thank you for your 17:42:22</p> <p>16 time. I have no further questions.</p> <p>17 MR. HOLMES: None from me. Thank you very</p> <p>18 much.</p> <p>19 THE VIDEO OPERATOR: This concludes</p> <p>20 today's videotaped deposition of Dr. Kevin 17:42:29</p> <p>21 Almeroth. We're off the record at 5:43 p.m. Thank</p> <p>22 you.</p> <p>23 (Discussion off the record.)</p> <p>24 MR. SILBERT: With gratitude to counsel</p> <p>25 for reminding me, I'd like to designate this 17:43:07</p> <p>Page 293</p>

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<p>1 transcript as highly confidential, outside counsel 17:43:10 2 only. 3 (TIME NOTED: 5:43 p m.) 4 --o0o-- 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p> <p style="text-align: right;">Page 294</p>	<p>1 I, the undersigned, a Certified Shorthand 2 Reporter of the State of California, do hereby 3 certify: 4 That the foregoing proceedings were taken 5 before me at the time and place herein set forth; 6 that any witnesses in the foregoing proceedings, 7 prior to testifying, were administered an oath; that 8 a record of the proceedings was made by me using 9 machine shorthand which was thereafter transcribed 10 under my direction; that the foregoing transcript is 11 a true record of the testimony given. 12 Further, that if the foregoing pertains to 13 the original transcript of a deposition in a Federal 14 Case, before completion of the proceedings, review 15 of the transcript [X] was [] was not requested. 16 I further certify I am neither financially 17 interested in the action nor a relative or employee 18 of any attorney or any party to this action. 19 IN WITNESS WHEREOF, I have this date 20 subscribed my name. 21 22 Dated: 6/30/2016 23 24 <%signature%> 25 CARLA SOARES CSR No. 5908</p> <p style="text-align: right;">Page 296</p>
<p>1 2 3 4 5 6 7 8 I, KEVIN C. ALMEROOTH, do hereby declare 9 under penalty of perjury that I have read the 10 foregoing transcript; that I have made any 11 corrections as appear noted, in ink, initialed by 12 me, or attached hereto; that my testimony as 13 contained herein, as corrected, is true and correct. 14 EXECUTED this _____ day of _____, 15 2016, at _____, 16 (City) (State) 17 18 19 20 _____ 21 KEVIN C. ALMEROOTH 22 23 24 25</p> <p style="text-align: right;">Page 295</p>	